IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

PERIPHAGEN, INC., Plaintiff, v. KRYSTAL BIOTECH, INC., KRISH S. KRISHNAN, and SUMA KRISHNAN, Defendants.	Civil Action No.: 20-646 JURY TRIAL DEMANDED

COMPLAINT

Plaintiff PeriphaGen Inc. ("PeriphaGen") files this Complaint against Defendants Krystal Biotech Inc. ("Krystal"), Krish Krishnan and Suma Krishnan (collectively the "Krishnans") (all three collectively "Defendants") seeking damages and injunctive relief for misappropriation of trade secrets, breach of contract, false description and designation of origin, and correction of inventorship.

Parties

1. PeriphaGen is a Delaware corporation with a principal place of business in Pittsburgh, Pennsylvania.

2. Krystal is a Delaware corporation with a principal place of business in Pittsburgh, Pennsylvania.

3. Krish Krishnan is an adult individual residing San Francisco, California. Krish Krishnan is a Co-Founder as well as Chairman and Chief Executive Officer of Krystal.

4. Suma Krishnan is an adult individual residing in San Francisco, California. Suma Krishnan is a Co-Founder as well as Chief Operating Officer of Krystal.

Jurisdiction and Venue

5. This Court has subject matter jurisdiction under 28 U.S.C. §1331, because the Complaint asserts claims which arise under the laws of the United States, specifically a claim for violation of the Federal Defend Trade Secrets Act, 18 U.S.C. §1836, False Description and False Designation of Origin under 15 U.S.C. §§1125(a)(1)(A) and 1125(a)(1)(B), and a claim for Correction of Inventorship under 35 U.S.C. § 256.

6. Krystal is subject to general and specific personal jurisdiction in Pennsylvania because Krystal's principal place of business is located in Pittsburgh, Pennsylvania.

7. Krish Krishnan is subject to personal jurisdiction in Pennsylvania. Krish Krishnan serves as Chairman and CEO of Krystal in Pittsburgh, Pennsylvania.

8. Suma Krishnan is subject to personal jurisdiction in Pennsylvania. Suma Krishnan serves as Chief Operating Officer of Krystal in Pittsburgh, Pennsylvania.

9. The Krishnans have availed themselves of the rights, benefits, and privileges of doing business in Pennsylvania.

10. The claims arise out of Defendants' conduct in Pennsylvania.

11. The Krishnans founded Krystal and established its place of business in Pittsburgh, Pennsylvania. Krish Krishnan and Suma Krishnan are each involved in the management and operations of Krystal in Pittsburgh.

12. Venue is proper in this Judicial District under 28 U.S.C. §§ 1391 because at least one Defendant resides in this District and a substantial part of the events giving rise to the claims against all Defendants occurred in this District. The claims arise out of events occurring in Pittsburgh, Pennsylvania, and actions taken by each of the Defendants in Pittsburgh, Pennsylvania.

Nature of the Dispute

13. PeriphaGen seeks a permanent injunction and monetary damages arising out of Defendants' misappropriation of PeriphaGen trade secrets and confidential information, conversion of PeriphaGen property for their own benefit, false description and designation of origin, failure to name PeriphaGen employees as inventors on patents, and Krystal's breaches of contracts with PeriphaGen.

HSV-1 Gene Therapy

14. This dispute concerns gene therapy technology based on Herpes Simplex Virus-1 (HSV-1). HSV-1 can be genetically engineered to deliver a gene to specific tissues in the human body to treat diseases impacting those tissues. Viruses genetically engineered to deliver gene therapies are called vectors or gene therapy vectors.

15. A goal of gene therapy is to use a gene therapy vector to deliver to a target cell a gene that is missing from the target cell which needs that gene in order to function properly. HSV-1 gene therapy vectors take advantage of the virus's ability to infect target cells. The vectors are engineered to carry genes that may be missing from those cells. Once the viral vector infects a target cell, the missing gene can be restored to the target cell.

16. One way HSV-1 vectors are made safe is to engineer the virus to be replication defective. A replication defective vector is an engineered virus capable of infecting target cells to deliver a gene to the cell, but incapable of replicating to make more copies of the virus. Replication defective vectors are thus inhibited from causing cell death and prevented from causing disease.

17. An HSV-1 vector can be genetically engineered to be replication defective by deleting all or a portion of one or more HSV-1 genes necessary to the HSV-1 normal life cycle. Among the HSV-1 genes that can be deleted in

engineering a replication defective vector are ICP0, ICP4, ICP22, ICP27, ICP47, and UL55. Each of these genes has a different function in the HSV-1 genome. Deletion of all or a portion of one or a combination of these genes will create a vector having unique characteristics.

18. The utility and effectiveness of a gene therapy vector will vary depending on the combination of HSV-1 genes deleted, as well as the location and extent of those gene deletions. Extensive research is required to determine specific vector characteristics resulting from specific combinations of deletions.

19. Once the HSV-1 virus has been genetically engineered to be replication defective, a gene of interest can be added to the genome of the engineered vector, so that the vector can now express the gene of interest in the target cell where that gene is missing. Almost any gene of interest can be inserted into the gene therapy vector as long as the vector will be distributed in the tissues where the gene is to be delivered, and as long as the vector can infect the target tissues, expresses the gene of interest, and does not have excessive toxicity for those target cells.

20. Because the engineered vector is not capable of replicating like a normal virus, it is also necessary to create a "complementing cell line" to grow the vector. A complementing cell line contains cells genetically engineered to express the genes that have been deleted from the vector that are necessary for the vector

to replicate. The replication defective vector can thus be grown or manufactured in the complementing cell line because the cell line is replacing the genes that are missing from the vector.

21. It is also necessary to develop a process for purification of the vector because the vector is grown in a cell culture medium with several extraneous components including cells and proteins.

PeriphaGen, Inc. Is a Pioneer In Development Of Gene Therapy Using Recombinant Herpes Simplex Virus-1 Vectors

22. While general principles underlying HSV-1 gene therapy are described in the scientific literature, years of research and development are necessary to develop specific HSV-1 gene therapy vectors with appropriate toxicity and biodistribution profiles.

23. PeriphaGen is a biopharmaceutical company incorporated in Delaware in 2006 with laboratory space in Pittsburgh, Pennsylvania, that has invested millions of dollars and years of research to develop HSV-1 gene therapy vectors.

24. PeriphaGen's business is focused on the development of gene therapy technology and products, with an internal development effort focused mainly on peripheral nerve gene therapy products to improve patients' quality of life by developing innovative products for difficult to treat neurological disorders.

PeriphaGen has developed a proprietary Neuronal Therapeutics ("NET") platform to express gene constructs in specific regions of the nervous system.

25. PeriphaGen's NET platform is based on its research and development program for use of recombinant HSV-1 gene therapy vectors to deliver genes of interest to specific tissues in the body for the treatment of disease. PeriphaGen specifically targeted neurologic conditions using the NET platform by administering the gene therapy products to the skin and has proven through clinical trials that this route of administration is safe in humans.

26. PeriphaGen's business grew out of the research program and interests of its founders beginning more than 20 years ago at the University of Pittsburgh.

27. While at the University of Pittsburgh, PeriphaGen founders David Krisky, M.D., Ph.D., and James Wechuck, Ph.D, began their research into development of recombinant HSV-1 vectors for targeted gene therapy.

28. David Krisky earned his doctoral degree in 1997 and medical degree in 1999 through the University of Pittsburgh School of Medicine's Medical Scientist Training Program. In fulfillment of the research component of the program, Dr. Krisky completed his doctoral dissertation on the development of replication defective HSV-1 as a gene therapy vector.

29. After completing his medical residency in 2002, Dr. Krisky took a faculty position at the University of Pittsburgh to continue to develop HSV-1 vectors in support of developing human clinical trials.

30. James Wechuck completed his doctoral dissertation at the University of Pittsburgh on the production, purification, and use of HSV-1 vectors for delivery to stem cells. In the course of his work at the University of Pittsburgh, Dr. Wechuck developed expertise in the manufacturing, purification, and testing of HSV-1 viral vectors for use in gene therapy technology. Dr. Wechuck subsequently took a research faculty position at the University of Pittsburgh to continue his development of HSV-1 gene therapies.

31. As their work with HSV-1 progressed from basic research to applied research, Drs. Krisky and Wechuck moved on from the University of Pittsburgh to join PeriphaGen to focus on development of gene therapies for treatment of neurological disorders using recombinant HSV-1 vectors.

32. PeriphaGen licensed base technology from the University of Pittsburgh concerning development of recombinant HSV-1 vectors. Dr. Krisky is an inventor on the base technology licensed from the University of Pittsburgh. The base technology PeriphaGen licensed was not at a stage where it could be used in a clinical setting.

33. In 2006, PeriphaGen started its research and development program to develop viral vectors for use in gene therapies that could ultimately be administered to patients in clinical trials under the strict regulations of the United States Food and Drug Administration ("FDA").

34. PeriphaGen spent several years developing HSV-1 vectors that could meet the stringent requirements for FDA approval of a gene therapy product. One of the several vectors developed by PeriphaGen was designated PGN-703.

35. The PGN-703 vector was an HSV-1 backbone that included mutations of several of the HSV-1 wild-type genes, so that the PGN-703 vector was replication defective. Thus, the PGN-703 vector would not grow or duplicate in the absence of a complementing cell line that expresses the essential HSV-1 genes required for replication that are missing from the PGN-703 backbone. Accordingly, in addition to developing the PGN-703 vector backbone, PeriphaGen also developed complementing cell lines to propagate PGN-703 vectors.

36. PeriphaGen used the PGN-703 backbone in clinical trials approved by FDA, giving PeriphaGen significant FDA regulatory history for PGN-703. Accordingly, the PGN-703 data and regulatory history formed part of PeriphaGen's assets that it could offer to other companies seeking a vector to develop gene therapies.

37. The coordinated engineering of the PGN-703 backbone and complementing cell lines yielded vectors that could be grown and purified to a scale that FDA would allow to be used in human clinical trials. After several years of vector and cell line optimization, that effort culminated in PeriphaGen obtaining FDA approval for, and conducting, two human clinical trials between 2008 and 2012.

38. A specific vectors developed by PeriphaGen using the PGN-703 backbone was called D3GFP. D3GFP was developed based on the PGN-703 backbone with a gene for Green Fluorescent Protein ("GFP") added. D3GFP was a research tool to determine whether a protein could be expressed from the viral vector in a given type of cell or tissue. When GFP is expressed by a tissue, the tissue emits a green fluorescence when subjected to fluorescent light. GFP could thus be used as a marker to show whether the D3GFP vector was capable of infecting cells in the tissue of interest and able to express a protein.

39. PeriphaGen spent several years optimizing PGN-703, D3GFP, and complementing cell lines, and used the PGN-703 backbone in human clinical trials that were submitted to and approved by FDA.

40. In order to present the PGN-703 vectors to FDA, PeriphaGen spent years developing quality controls, standards, production methods, and purification

methods for PGN-703 so that the products would meet FDA requirements for use in human clinical studies.

41. There were multiple advantages to starting with the PGN-703 vector backbone for development of a gene therapy to present to FDA, including previous use in clinical trials, a functional master cell bank, FDA's experience of three previous pre-Investigational New Drug ("IND") meetings for products using a PGN-703 vector backbone, a clear relationship to the D3GFP vector, and positive history at FDA with use of the PGN-703 vector backbone.

Krish And Suma Krishnan Founded Krystal Biotech In December 2015

42. In December 2015, Suma Krishnan formed Krystal as a California limited liability company, listing a principal address at 41 W. Shore Rd, Belvedere, California, which was also the Krishnans' residence.

43. In early 2016, the Krishnans contacted PeriphaGen to inquire about PeriphaGen's technology related to use of replication defective HSV-1 gene therapy vector technology.

44. When the Krishnans initially reached out to PeriphaGen, the Krishnans expressed interest in licensing PeriphaGen's recombinant HSV-1 technology for application in the treatment of dermatologic diseases. At that time, Krystal did not have any physical offices, laboratory space, or laboratory

equipment, nor did the company or the Krishnans have any experience working with HSV-1 gene therapy vectors.

45. The Krishnans told PeriphaGen they were interested in potentially using PeriphaGen's recombinant HSV-1 technology for development of a gene therapy treatment for a fatal genetic skin disease, Recessive Dystrophic Epidermolysis Bullosa ("DEB").

Krystal Enters Into A Confidential Disclosure Agreement And A First Material Transfer Agreement With PeriphaGen

46. On March 22, 2016, PeriphaGen and Krystal entered into a Mutual Confidential Disclosure Agreement ("CDA") (**Exhibit A**). The purpose of the CDA was "In connection with the evaluation and analysis of a possible business relationship and contractual agreement between PeriphaGen and [Krystal]." (Exhibit A, Statement of Purpose.)

47. Under the CDA, Krystal acknowledged that any Confidential Information, as defined in the CDA, shared by PeriphaGen under the CDA was "valuable, confidential, and a trade secret." (Exhibit A, Section 2(a).) Krystal also agreed not to disclose Confidential Information to third parties with limited exceptions that ensured protection of the Confidential Information. (Exhibit A, Section 2(b).) Confidential Information was defined in the CDA to mean

> all information, documentation and materials of the Disclosing Party (whether or not patentable or copyrightable, and whether or not currently patented or copyrighted) disclosed or made available to the

> Receiving Party or their respective agents or advisors, regardless of the form in which disclosed and whether or not marked as 'confidential' or 'proprietary," including but not limited to the following: any technical or non-technical information, data or know-how, including that which relates to research, products and/or services, product and/or services plans, methods, processes, formulations, product and/or services pricing and strategy, business plans or business methods, including business policies, documents, financial data, plans and forecasts, models, tools and templates, proposals, actual or proposed alliance partners, actual or proposed vendors, vendor offerings and pricing, actual or proposed clients, client usage, and client purchasing potential, actual or proposed markets, sales and marketing materials and methods, software, developments, inventions, processes, algorithms, designs, drawings, engineering, and hardware configuration information. Confidential Information includes any reports or documents created by the Receiving Party that include, summarize or refer to the Disclosing Party's Confidential Information.

(Exhibit A, Section 1.) The term "Confidential Information" as used in this Complaint includes and incorporates all Confidential Information provided to Krystal under the CDA.

48. Once the CDA was in place, PeriphaGen created an electronic data room to share its Confidential Information with Krystal on March 23, 2016. The material shared in the data room was intended to allow Krystal to consider taking a license to PeriphaGen's replication defective HSV-1 technology. PeriphaGen shared Confidential Information about several of its HSV-1 vectors and complementing cell lines, and about the use of those vectors to generate gene expression in various tissues. Among the information included in the data room,

PeriphaGen shared Confidential Information about two specific HSV-1 vectors developed and owned by PeriphaGen: PGN-703 and PGN-503.

49. On April 1, 2016, Drs. Krisky and Wechuck on behalf of PeriphaGen met with Suma Krishnan, Krish Krishnan, and Pooja Agarwal on behalf of Krystal at PeriphaGen's offices in Pittsburgh, Pennsylvania. At this meeting Drs. Krisky and Wechuck discussed Confidential Information with the Krishnans and Pooja Agarwal about the applicability of PeriphaGen's technology to dermatological conditions.

50. In advance of this meeting, Suma Krishnan specifically requested PeriphaGen's toxicology and biodistribution data for PGN-703. Under the protection of the CDA, PeriphaGen provided a report showing toxicology and biodistribution data for PeriphaGen's proprietary HSV-1 vectors. This data provided proof of concept that an HSV-1 vector developed using PeriphaGen's technology was useful to deliver a gene of interest to skin cells with low toxicity. This data confirmed PeriphaGen's statements to Krystal that PeriphaGen's HSV-1 vectors would be useful to deliver a gene of interest for skin conditions and for providing gene expression in skin tissue.

51. Throughout April and May 2016, under the protection of the CDA, PeriphaGen shared specific proprietary Confidential Information conceptualizing application of PeriphaGen's HSV-1 technology developed over decades to the

area of dermatological diseases. Dr. Krisky and Dr. Wechuck proposed HSV-1 vectors likely to be useful for expression of the Col7 gene in skin cells, including the PGN-703 vector, ICP0/ICP4 deletion vectors, ICP4/ICP22 deletion vectors, ICP0/ICP4/ICP22 deletion vectors, and ICP4 deletion vectors. In this timeframe, PeriphaGen also provided Krystal with Confidential Information about the significance of the way these genes were deleted, and in particular, the importance of not deleting the promoter regions of ICP47 when deleting other genes to create a gene therapy vector.

52. Among PeriphaGen's Confidential Information shared with Krystal in March, April, and May 2016 under the terms of the CDA were:

a. A slide deck showing all of PeriphaGen's vectors and technology for treating neuropathy and pain from March 2016 including strategies for composition of multiple gene expressing vectors;
b. Pre-IND meeting packages for PGN-703 and PGN-503 submitted to FDA concerning uses of PeriphaGen's recombinant HSV-1 vectors for gene therapy;
c. Manufacturing processes for HSV-1 vectors for use in gene therapy as part of pre-IND submissions;
d. Purification processes for HSV-1 vectors for use in gene therapy as part of pre-IND submissions;
e. Testing methods and schedules for successful lot release of human clinical trial viral vector product that was included in pre-IND submissions for PGN-503 and PGN-703;
f. Unpublished PeriphaGen patent applications related to PGN-503 covering vector development and uses for vectors that express Neurotrophin-3;
g. Information concerning previous funding and business transactions relating to PeriphaGen;
h. A full draft report of toxicology and biodistribution studies of PGN-703 intradermal administration showing persistence of vector at the

injection site (skin) and no adverse findings in histopathology analysis of multiple tissues due to the administration of test article; and

i. A copy of PeriphaGen study report 51 showing long term gene expression in neuronal (dorsal root ganglion) tissue from a replication defective HSV-1 vector.

53. PeriphaGen takes great care to maintain as confidential all of the information specifically identified in the paragraph above and all of the Confidential Information, including biological material, that PeriphaGen shared with Krystal and the Krishnans, including by, among other things, having third-party recipients execute agreements specifically circumscribing their use and protecting against unauthorized disclosure, requiring employees to execute agreements with confidentiality provisions, restricting access to Confidential Information to employees who needed to know such information, requiring signed separation and mutual release agreements from employees leaving PeriphaGen, restricting access to laboratory space, and restricting access to paper files containing Confidential Information.

54. Based on the initial Confidential Information provided by PeriphaGen, Krystal expressed interest in taking a license to PeriphaGen's proprietary recombinant HSV-1 technology. Accordingly, on May 13, 2016, Krystal entered into a Material Transfer Agreement ("First MTA") with PeriphaGen. (**Exhibit B**.)

55. Under this First MTA, PeriphaGen agreed to prepare for Krystal a purified stock of a specific PeriphaGen-developed HSV-1 vector—D3GFP—for Krystal to conduct a defined experiment testing gene expression from this vector in skin cells. (Exhibit B, pp. 4-5.)

56. Under the terms of this First MTA, PeriphaGen retained all ownership interest of the Material and the Information, as those terms are defined in the First MTA. (Exhibit B, recitals and Section 1.) Material and Information as used in this Complaint describe any material and information provided by PeriphaGen to Krystal or the Krishnans under any MTA. The First MTA incorporated by reference the CDA under which Krystal and PeriphaGen were operating. (Exhibit B, Section 5.) The term "Confidential Information" as used in this Complaint includes and incorporates Material and Information under the First MTA and each of the four subsequent MTAs discussed below.

57. Krystal agreed that the Material and Information shared under the terms of the First MTA could be used only for the research purposes described in Exhibit B of the agreement, could not be used in humans, and could not be used for any commercial purposes. (Exhibit B, Section 2.)

58. Krystal also agreed that it would share with PeriphaGen all experimental data and information generated from the experiments conducted under the First MTA. (Exhibit B, Section 2.) Krystal agreed that it would submit

to PeriphaGen any proposed disclosure containing experimental data or information produced using the Material or Information under the First MTA at least 30 days before such disclosure was made, so that PeriphaGen could evaluate potential patent protection to be applied for in advance of any disclosure. (Exhibit B, Section 4.)

Krystal And PeriphaGen Reach An Agreement For Sub-Lease Of Laboratory Space And Use Of Laboratory Equipment

59. At the time of the First MTA, Krystal had no laboratory space and no laboratory equipment. PeriphaGen had a full working laboratory at 2100 Wharton Street, Suite 701, Pittsburgh, Pennsylvania.

60. Based on Krystal's expressions of interest in licensing PeriphaGen's technology, the two companies discussed sharing the laboratory space then occupied by PeriphaGen and permitting Krystal to use PeriphaGen's laboratory equipment that was already in the space.

61. On June 1, 2016, Krystal and PeriphaGen entered into an agreement, named the Access and Use Agreement (**Exhibit C**), to share PeriphaGen's laboratory space in Pittsburgh. Under the Access and Use Agreement, Krystal took over the lease and agreed to PeriphaGen's continued use of the space at no cost to PeriphaGen. (Exhibit C, preamble and Section 1.) In return, PeriphaGen agreed to allow Krystal to use the laboratory equipment already located in the space. (Exhibit C, Section 2.) Also, PeriphaGen agreed to allow Krystal to use

general chemical reagents stored in the laboratory. (Exhibit C, Section 5.) The Access and Use Agreement explicitly restricted Krystal from using PeriphaGen's vector, cell line, and plasmid reagents. (Exhibit C, Section 5.)

Krystal Enters into a Second Material Transfer Agreement with PeriphaGen

62. Shortly after formalizing the agreement to share laboratory space, the two companies entered into a Second Material Transfer Agreement ("Second MTA") dated June 22, 2016. (Exhibit D.) The Second MTA incorporated by reference the CDA under which Krystal and PeriphaGen were operating. (Exhibit D, Section 5.) Under the Second MTA, PeriphaGen agreed to provide to Krystal a series of HSV-1 vectors, based on the D3GFP vector provided under the First MTA but including genes of interest to Krystal, specifically the Col7 and LH3 genes. (Exhibit D, p. 5.) For each vector, PeriphaGen would replace the GFP gene in D3GFP with a version of either Col7 or LH3 then produce a purified stock of vector. (Id.)

63. Under the terms of the Second MTA, PeriphaGen retained all ownership interest of the Material and the Information, as those terms are defined in the Second MTA, covered by the Second MTA until a license was negotiated between Krystal and PeriphaGen. (Exhibit D, recitals and Section 1.) Krystal agreed that the Material and Information shared under the terms of that agreement could be used only for the research purposes described in Exhibit B of the

agreement, could not be used in humans, and could not be used for any commercial purposes. (Exhibit D, Section 2.)

64. Krystal also agreed that it would not transfer or disclose the Material or Information covered under the Second MTA to any third party without written permission from PeriphaGen or until taking a license. (Exhibit D, Section 3.) Further, Krystal agreed not to file any patent application claiming the Material covered under the Second MTA without getting written permission from PeriphaGen or obtaining a license from PeriphaGen for the relevant Material. (Exhibit D, Section 3.)

65. Also similar to the First MTA, Krystal agreed that it would submit to PeriphaGen any proposed disclosure containing experimental data or information produced using the Material under the First MTA at least 30 days before such disclosure was made so that PeriphaGen could evaluate potential patent protection to be applied for in advance of any disclosure. (Exhibit D, Section 4.)

Unbeknownst To PeriphaGen, Krystal Filed A Patent Application Based On The Material And Information Shared Under The First And Second MTAs And The CDA Without Notifying PeriphaGen Or Taking A License

66. Without notifying PeriphaGen or taking a license from PeriphaGen, Krystal filed a patent application on December 28, 2016 titled "Compositions and Methods for the Treatment of Wounds, Disorders, and Diseases of the Skin" (U.S.

Patent Application No. 15/393,151 ("the '151 application")). The '151 application lists the purported inventors as Suma Krishnan and Pooja Agarwal.

67. The '151 application claims priority to a provisional application, but with additional examples, data, experiments, and claims added. Specifically, the '151 application added Confidential Information belonging to PeriphaGen and covered under the CDA, First MTA, and/or Second MTA. Krystal had filed the provisional application a few weeks after PeriphaGen provided its Confidential Information regarding HSV-1 vectors to Krystal under the terms of the CDA.

68. The '151 application describes construction of a vector named by Krystal as KB103. According to the '151 application, "the KB103 vector was generated from D3GFP, a replication-defective HSV-1 vector backbone harboring GFP in place of the viral ICP4." (*See* '151 application, para. 438.)

69. This D3GFP vector identified in Krystal's patent application is the same D3GFP vector covered by the First MTA and owned by PeriphaGen.

70. The '151 application proceeds to describe a process for creating KB103 by which the Col7A1 gene was inserted into the D3GFP vector. (*See* '151 application, para. 438.) This is the same D3GFP vector developed by and belonging to PeriphaGen. The process for generating KB103 described in the '151 application is the process that PeriphaGen used to prepare the vectors under the Second MTA. Under the terms of the Second MTA this Material and

Information remained property of PeriphaGen until and unless Krystal took a license for the Material.

71. The '151 application also describes a series of experiments using the PeriphaGen vector under the First and Second MTAs. ('151 application, para. 440-466.)

72. Among the experiments described in the '151 application were gene expression studies in human skin cells tested in cell culture. ('151 application, Figure 4-6, para. 450-452.) Krystal also included in the '151 application functional studies of the Col7 protein expressed using the Material belonging to PeriphaGen under the Second MTA. ('151 application, Figures 7-10, para. 453-456.)

73. Additionally, Krystal included in the '151 application a description of studies testing in vivo expression of the Col7 gene from PeriphaGen's vector in a mouse model. ('151 application, Figures 11-12, para. 457-466.)

74. PeriphaGen was not aware of the existence of the '151 application or that it included disclosures regarding Confidential Information belonging to PeriphaGen until after the application published on October 12, 2017.

75. The '151 application ultimately issued as U.S. Patent No. 9,877,990. The claims of the '151 application and the '990 patent covered PeriphaGen

Material protected under the Second MTA. Further, the claims of the '990 patent rely on the enabling disclosure using PeriphaGen's Confidential Information.

76. Krystal filed continuation patent applications based on the same patent specification that relied on improper and unauthorized use of PeriphaGen's Confidential Information. Those applications issued as U.S. Patent Nos. 10,155,016 and 10,441,614. Krystal also filed a currently-pending continuation patent application, U.S. Patent Application No. 16/598,982, based on that same patent specification.

77. On April 11, 2019, Krystal filed U.S. Patent Application No. 16/381557, which issued on January 7, 2020 as U.S. Patent No. 10,525,090. The '090 patent specification discloses an HSV-1 gene therapy vector having an ICP4/ICP22 mutant backbone. The ICP4/ICP22 vector described in the '090 patent is based on PeriphaGen's Confidential Information disclosed by PeriphaGen to Krystal in March, April, and May 2016. Additionally, during that timeframe, Dr. Krisky and Dr. Wechuck conceived of, or at a minimum contributed to the conception of, the ICP4/ICP22 vector for use in gene therapy applications to treat gene-based skin disorders.

Krystal Continued Pursuing Development of a Gene Therapy Product Using PeriphaGen's HSV-1 Viral Vectors

78. Throughout 2016 and most of 2017, Krystal continued to express interest in obtaining a license to use PeriphaGen's replication defective HSV-1

vectors. In furtherance of pursuing the development pathway using PeriphaGen's Confidential Information, Krystal entered into an additional series of Material Transfer Agreements (Exhibits E (Third MTA), F (Fourth MTA), and G (Fifth MTA)) under which PeriphaGen allowed Krystal limited access to specific Material.

79. Each of the five MTAs with Krystal protected PeriphaGen against commercial use and disclosure of its Material and Information, as each of the MTAs required Krystal to take a license or reach a full business arrangement with PeriphaGen before any of the data or information could be disclosed to any third party, including investors and any regulatory authority such as FDA.

80. Each of the five MTAs incorporated by reference the CDA and also limited Krystal's permitted uses of the Material and Information to experiments described in the MTAs, limited Krystal's permitted disclosure of data and information generated or shared under the MTA, and expressly provided that PeriphaGen retained ownership of the vectors. Each of the MTAs also prohibited use of the Material in humans.

81. Krystal also entered into independent consulting agreements with James Wechuck and David Krisky. The consulting agreements did not give Krystal any rights to use PeriphaGen's Confidential Information covered by the CDA and/or the MTAs Krystal entered into with PeriphaGen. Any use of

PeriphaGen's Confidential Information disclosed under the CDA and/or the MTAs still required Krystal and/or the Krishnans to take a license. Drs. Krisky and Wechuck entered into the consulting agreements several months after PeriphaGen had set forth the underlying information and plans for Krystal to use PeriphaGen's Confidential Information to develop a gene therapy vector addressing skin conditions.

82. Under the Third MTA, dated January 11, 2017, PeriphaGen provided Krystal with its "SHG" vector. (Exhibit E, p. 4.) Under the Research Plan that formed part of the Third MTA, Krystal was permitted to conduct experiments to identify which complementing cell line clone produced the highest amount of vector, indicative of a more robust complementing cell line. (Exhibit E., p. 5.) On information and belief, Krystal used the Material and Information shared under the Third MTA to generate complementing cell lines for HSV-1 vectors, including the various versions of Krystal's vectors used to generate data presented to FDA and used in support of Krystal's pre-clinical and clinical trials for its products. PeriphaGen retained ownership of the Material and Information shared under the Third MTA, restricted use of the Material and Information, and restricted disclosure of the results of any experiments conducted using the Material or Information. Additionally, under the Third MTA PeriphaGen would

jointly own any intellectual property arising from use of the Materials shared under that agreement.

83. Under the Fourth MTA, dated January 24, 2017, PeriphaGen provided Krystal with the same vector provided under the Second MTA but with an untagged Col7 gene. (Exhibit F, p. 5.) While the tagged version of a gene is not suitable for use in humans, an untagged Col7 gene is suitable for use in humans, including for human clinical trials. Under the Research Plan that formed part of the Fourth MTA, PeriphaGen allowed Krystal to perform gene expression and western blot experiments for various cell types. (Exhibit F, p. 6.) The purpose of the experiments under the Fourth MTA was to determine whether PeriphaGen's vector would allow expression of the Col7 gene in the skin cells of interest using a gene that was effectively ready to move on to clinical testing.

84. Under the Fourth MTA, PeriphaGen retained ownership of the Material and Information covered by the agreement until a license was negotiated. The Fourth MTA also restricted Krystal's use of the Material and Information, and restricted disclosure of the Material and Information to third parties without consent from PeriphaGen.

85. Under the Fifth MTA, dated August 29, 2017, PeriphaGen provided Krystal with access to the same D3GFP vector that was governed by the First MTA, but under the Fifth MTA the Research Plan allowed PeriphaGen's vector to

be tested by Dr. Irina Gurevich at Stanford University to determine biodistribution following intradermal or topical delivery in mice. (Exhibit G, pp. 4-5.)

86. Under the Fifth MTA, PeriphaGen retained all ownership in the Material and Information covered by the agreement, restricted Krystal's use and distribution of the Material and Information, and restricted Krystal's disclosure of the results of any experiments under the Fifth MTA. Additionally, under the Fifth MTA PeriphaGen would jointly own any intellectual property arising from use of the Confidential Information shared under that agreement.

87. At each stage of the process of entering into additional MTAs with Krystal, PeriphaGen protected and maintained its rights to the proprietary HSV-1 vectors that PeriphaGen had developed.

Krystal Improperly Used PeriphaGen's Confidential Information To File For Patent Protection, Raise Capital From Investors, And Make Regulatory Filings With FDA

88. Krystal took PeriphaGen's HSV-1 vectors, complementing cell lines, knowledge regarding vector development, knowledge regarding preparation and purification, and data generated under the First, Second, Third, Fourth, and Fifth MTAs and proceeded to use all of that Confidential Information as if it belonged to Krystal without any regard for PeriphaGen or PeriphaGen's rights and interests in the Confidential Information.

89. In September 2017, Krystal submitted a Form S-1 with the Securities and Exchange Commission in advance of Krystal's Initial Public Offering ("IPO") to raise capital for the company.

90. In its S-1, Krystal identified its lead product candidate as KB103.

91. KB103 is the same named product that Krystal identified in the '151 application as being derived from PeriphaGen's D3GFP vector using PeriphaGen's pSASB3 plasmid.

92. Krystal's S-1 also includes several figures that are identical to figures included in Krystal's '151 application concerning experiments performed using PeriphaGen's vectors derived from D3GFP.

93. The data included in these figures in both the '151 application and Krystal's S-1 using PeriphaGen's vectors show (among other things) vector dose-dependent expression in Col7 transcripts, Col7 protein expression detected in KB103-infected fibroblasts and keratinocytes, Col7 expression in DEB skin cells, LH3 expression in KB103-infected keratinocytes, KB103 mediated inhibition of TSP-1 expression in fibroblasts, and KB103-infected cells adhesion to fibronectin and Collagen 1.

94. All of the information and data presented in these figures belongs to PeriphaGen under the terms of the CDA and the First, Second, Third, Fourth, and Fifth MTAs.

95. Krystal's S-1 also purports that the product named KB103 was developed using a patent-pending gene therapy platform called Skin TARgeted Delivery platform, or "STAR-D."

96. On information and belief, the technology, know-how, and information underlying STAR-D is based in whole or in part on PeriphaGen's Confidential Information.

97. Also according to the S-1, Krystal had a pre-IND meeting with FDA in October 2016 regarding a development timeline for Krystal's lead product candidate, KB103.

98. On information and belief, the only vectors to which Krystal had access in October 2016 and for which there was sufficient data required for a pre-IND meeting were PeriphaGen's PGN-703 based vectors covered by the CDA and the First and Second MTA.

99. On information and belief, Krystal used PeriphaGen's Confidential Information for its pre-IND submission to FDA in support of KB103.

100. On information and belief, Krystal used PeriphaGen's Confidential Information to support a conditional designation by FDA for KB103 as a "rare pediatric disease product application." On information and belief, Krystal also used PeriphaGen's Confidential Information in support of a PRIME designation

from the European Medicines Agency (EMA), as well as Orphan Drug designations from both FDA and EMA.

101. The FDA designation as a "rare pediatric disease product application" could qualify the product sponsor (in this case Krystal) for a Rare Pediatric Priority Review Voucher from FDA.

102. Under this voucher program, a drug product applicant that receives FDA approval of a drug for a rare pediatric disease receives a voucher from FDA for priority review of a subsequent drug application for a different product. A company that receives a voucher can use the voucher for another product it has in development, or can sell the voucher to another drug product applicant seeking priority review of an application. Secondary market prices for such vouchers have reached as high as $350 million.

103. On information and belief, Krish Krishnan, as CEO, and Suma Krishnan, as COO, have knowingly taken PeriphaGen's Confidential Information, and used it for the benefit of their own company, Krystal. On information and belief, the Krishnans knowingly included Confidential Information in Krystal's S-1 that belonged to PeriphaGen and passed it off as if it belonged to Krystal.

104. The Krishnans have unlawfully taken PeriphaGen's proprietary HSV-1 vector technology and Information, including PeriphaGen's Confidential

Information and proceeded to use PeriphaGen's property for their own benefit to raise investment capital for the company they founded, Krystal.

105. The Krishnans would be unjustly enriched if they were to retain their equity interests in Krystal, the company whose lead product candidate and product development platform are based on Confidential Information belonging to PeriphaGen.

106. On information and belief, Krystal and the Krishnans have continued to use PeriphaGen's Confidential Information in support of Krystal's IND submission to FDA for KB103.

107. On information and belief, Krystal has also continued using PeriphaGen's Confidential Information to develop products using additional HSV-1 vectors other than PGN-703, such as ICP0/ICP4 vectors, ICP4/ICP22 vectors, ICP4 vectors, and ICP0ICP4/ICP22 vectors, as well as PeriphaGen Confidential Information regarding how to make these vectors without disrupting ICP47 gene expression.

108. These vectors as well as the associated complementing cell lines and purification mechanisms, are based on PeriphaGen's Confidential Information shared under the terms of the CDA and/or one or more of the five MTAs entered between the parties.

109. Krystal has continued to use Confidential Information from the PGN-703 based vector described in the '990 patent to promote the company to investors and in the medical and scientific community.

110. At least as early as in its S-1 filed with the SEC in September 2017, Krystal has promoted itself based on the strength of having a first mover advantage in dermatological gene therapy with regards to an off-the shelf gene therapy product candidate and topical gene therapy application. This first mover advantage and off-the-shelf gene therapy product candidate were created by PeriphaGen, using PeriphaGen's Confidential Information, and unlawfully taken by Krystal without appropriate compensation to PeriphaGen.

111. On October 26, 2017, PeriphaGen notified Krystal in writing that PeriphaGen was terminating each of the First, Second, Third, Fourth, and Fifth MTAs. PeriphaGen had in good faith provided Krystal with full access to Confidential Information under the terms of the CDA, and access to biological Material under five separate MTAs over the course of 19 months. PeriphaGen was no longer willing to continue providing Krystal with Confidential Information, including biological Material, without entering into a business relationship through a contractual arrangement under which Krystal could license or acquire rights to use PeriphaGen's Material and Confidential Information. Under the terms of the MTAs, Material and Information covered by each of the

MTAs and disclosure of the results of any experiments conducted with such Material and Information were to be returned within 30 days. No such return of Material and Information has occurred.

112. On March 27, 2018, Krystal issued a press release announcing that Krystal had submitted an IND application with FDA to initiate a Phase 1/2 clinical trial of KB103.

113. In the press release announcing the KB103 IND, Suma Krishnan stated "[KB103] is the result of an extensive research and preclinical effort by our internal team that included engineering, screening and testing a library of in-house constructed vectors and complementing cell lines. This reflects our deep expertise in our proprietary Skin Targeted Delivery Platform ('STAR-D')."

114. On information and belief, many of the vectors and complementing cell lines tested by Krystal belonged to PeriphaGen, the KB103 vector that is the subject of the IND is based on unauthorized use of PeriphaGen Material and Confidential Information, and the technology underlying the STAR-D platform on which all of Krystal's product candidates are developed is based on unauthorized use of PeriphaGen's Material and Confidential Information.

115. Krystal has used PeriphaGen's Confidential Information to attract investors to provide Krystal with capital under the false pretense that the technology, methods, and biological material underlying Krystal's lead product

candidate, KB103, and its gene therapy platform, STAR-D, belonged solely to Krystal.

116. On information and belief, prior to completing its IPO, Krystal had raised approximately $10.1 million from investors using PeriphaGen's Confidential Information.

117. Krystal likewise improperly and unlawfully used PeriphaGen's Confidential Information in support of its IPO.

118. On information and belief, upon completion of its IPO using PeriphaGen's Confidential Information, Krystal raised almost $50 million in cash, placing a value on the company at the time of approximately $100 million.

119. On further information and belief, Krystal has continued to use PeriphaGen's Confidential Information in support of additional public offerings to raise more capital for Krystal. Relying on PeriphaGen's Confidential Information, Krystal has raised hundreds of millions of dollars from investors. As of February 2020, less than four years after Krystal was founded, Krystal had reached a market capitalization in excess of $1 billion.

120. On information and belief, Krystal has continued to use PeriphaGen's Confidential Information in support of its continued clinical development program for each of its product candidates, including KB103, KB105, KB301, KB104, KB107, and KB5xx. Krystal is now promoting KB103 under the names

bercolagene telserpavec and beremagene geperpavec, using the abbreviation B-VEC for both names.

121. Krystal has relied on its improper and unauthorized use of PeriphaGen's Confidential Information in support of clinical trials for KB103. On information and belief, Krystal intends to continue to rely on further improper and unauthorized uses of PeriphaGen's Confidential Information in support of further clinical trials, including Phase 3 clinical trials to seek FDA approval of KB103.

122. On information and belief, Krystal intends to continue to rely on further improper and unauthorized uses of PeriphaGen's Confidential Information in support of the clinical development of each of the products in its pipeline, based on the STAR-D platform.

FIRST COUNT
Misappropriation of Trade Secrets under the Federal Defend Trade Secrets Act
18 U.S.C. § 1836
(Against All Defendants)

123. PeriphaGen incorporates each of the foregoing paragraphs of its Complaint.

124. The Defendants acted collectively and without authorization to misappropriate PeriphaGen's Confidential Information.

125. Under the Federal Defend Trade Secrets Act, Defendants had an independent obligation not to misappropriate PeriphaGen's Confidential Information.

126. PeriphaGen's Confidential Information is confidential and PeriphaGen takes and has taken reasonable measures to protect the confidential nature of PeriphaGen's Confidential Information.

127. PeriphaGen's Confidential Information derives economic value from its confidential nature, not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information.

128. PeriphaGen's Confidential Information relates to products intended for use by Krystal in interstate commerce, including products intended for approval by the United States FDA to market the product or products throughout the United States. Krystal has used PeriphaGen's Confidential Information to promote its product pipeline and company to investors in interstate commerce, and has used PeriphaGen's Confidential Information in support of and to conduct pre-clinical and clinical studies which have been conducted in interstate commerce.

129. As a direct and proximate result of Defendants' misappropriation of PeriphaGen's Confidential Information, PeriphaGen has been, and will continue to be, irreparably harmed.

130. As a direct and proximate result of Defendants' misappropriation of PeriphaGen's Confidential Information, PeriphaGen has suffered, and will continue to incur, monetary damages.

131. As a direct and proximate result of Defendants' misappropriation of PeriphaGen's Confidential Information, Defendants have been unjustly enriched.

132. Defendants willfully and maliciously misappropriated PeriphaGen's Confidential Information.

133. Based on Defendants' willful and malicious misappropriation of PeriphaGen's Confidential Information, PeriphaGen is entitled to recover exemplary damages and attorneys' fees under 18 U.S.C. § 1836(b)(3)(C), (D).

SECOND COUNT
Misappropriation of Trade Secrets under the Pennsylvania Trade Secrets Act
12 Pa.C.S. §§ 5302, *et seq.*
(Against All Defendants)

134. PeriphaGen incorporates paragraphs 1-122 of its Complaint.

135. The Defendants acted collectively and without authorization to misappropriate PeriphaGen's Confidential Information.

136. Under the Pennsylvania Trade Secrets Act, Defendants had an independent obligation not to misappropriate PeriphaGen's Confidential Information.

137. PeriphaGen's Confidential Information is confidential and PeriphaGen takes and has taken reasonable measures to protect the confidential nature of PeriphaGen's Confidential Information.

138. PeriphaGen's Confidential Information derive economic value, actual or potential, from its confidential nature, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.

139. Defendants, at the time they disclosed or used PeriphaGen's Confidential Information, knew or had reason to know that they used and disclosed PeriphaGen's Confidential Information using improper means.

140. Defendants, at the time they disclosed or used PeriphaGen's Confidential Information, knew or had reason to know that those trade secrets had been acquired under circumstances giving rise to a duty to maintain their secrecy or limit their use.

141. Defendants, at the time they disclosed or used PeriphaGen's Confidential Information, knew or had reason to know that those trade secrets were derived from or through a person who owed a duty to PeriphaGen to maintain their secrecy or limit their use.

142. The Defendants acted collectively and without authorization in misappropriating PeriphaGen's Confidential Information in violation of 12 Pa.C.S. §§ 5302, *et seq.*

143. Defendants' acts in misappropriating PeriphaGen's Confidential Information were intentional and in gross neglect of their duties.

144. Defendants' acts in misappropriating PeriphaGen's Confidential Information evince a reckless indifference of the rights of PeriphaGen, and an entire want of care so as to raise the presumption that Defendants were conscious of the consequences of their carelessness.

145. As a direct and proximate result of Defendants' misappropriation of PeriphaGen's Confidential Information, PeriphaGen has been, and will continue to be, irreparably harmed.

146. As a direct and proximate result of Defendants' misappropriation of PeriphaGen's Confidential Information, PeriphaGen has suffered, and will continue to incur, monetary damages.

147. Defendants' misappropriation of PeriphaGen's Confidential Information was sufficiently wanton, willful and reckless as to justify an award of punitive damages.

148. As a direct and proximate result of Defendants' misappropriation of PeriphaGen's Confidential Information, Defendants have been unjustly enriched.

149. Defendants willfully and maliciously misappropriated PeriphaGen's Confidential Information.

150. Based on Defendants' willful and malicious misappropriation of PeriphaGen's Confidential Information, PeriphaGen is entitled to recover exemplary damages and attorneys' fees.

THIRD COUNT
Aiding and Abetting Misappropriation of Trade Secrets
(Against Suma Krishnan and Krish Krishnan)

151. PeriphaGen incorporates each of the foregoing paragraphs of its Complaint.

152. On information and belief, the Krishnans were aware of Krystal's misappropriation of PeriphaGen's Confidential Information as described above, and they knowingly and actively participated in, substantially assisted, or endorsed Krystal's use of PeriphaGen's Confidential Information. On information and belief, the Krishnans encouraged and promoted this activity with full knowledge of Krystal's legal obligations under its agreements with PeriphaGen, and they intended to assist and benefit from Krystal's wrongful actions.

153. As a direct and proximate result of the Krishnans' aiding and abetting Krystal's misappropriation, PeriphaGen has been injured and the Krishnans have been and will continue to be unjustly enriched.

FOURTH COUNT
Correction of Inventorship of
U.S. Patent Nos. 9,877,990; 10,155,016; 10,441,614; & 10,525,090
(Against Defendant Krystal)

154. PeriphaGen incorporates each of the foregoing paragraphs of its Complaint.

155. Under 35 U.S.C. § 256, PeriphaGen is entitled to an Order from the Court requiring correction of the inventorship of the '990, '016, '614, and '090 patents and an Order directed to the U.S. Commissioner of Patents (the Director of the U.S. Patent and Trademark Office) requiring issuance of a Certificate of Correction.

156. Dr. Krisky and Dr. Wechuck are co-inventors of the '990, '016, '614, and '090 patents. Each conceived of, or contributed to the conception of, at least one of the inventions claimed in each of these patents. Dr. Krisky's and Dr. Wechuck's contributions were significant to the conception and reduction to practice of the inventions. Their contributions went beyond well-known concepts and were based significantly on confidential, proprietary, and trade secret information belonging to PeriphaGen.

157. PeriphaGen has been, and continues to be harmed by Krystal's failure to name Dr. Krisky and Dr. Wechuck as inventors on the '990, '016, '614, and '090 patents. As inventors, Dr. Krisky and Dr. Wechuck have ownership interests in the '990, '016, '614, and '090 patents. Under agreements Dr. Krisky and Dr.

Wechuck have with PeriphaGen, they are obligated to assign their ownership interest in each of those patents to PeriphaGen.

FIFTH COUNT
Breach of Contract
(Against Krystal Biotech, Inc.)

158. PeriphaGen incorporates each of the foregoing paragraphs of its Complaint.

159. Krystal knowingly, and for valid consideration, entered into each of the following agreements with PeriphaGen:

a. Confidential Disclosure Agreement ("CDA") (Exhibit A)
b. First Material Transfer Agreement ("First MTA") (Exhibit B)
c. Access and Use Agreement (Exhibit C)
d. Second Material Transfer Agreement ("Second MTA") (Exhibit D)
e. Third Material Transfer Agreement ("Third MTA") (Exhibit E)
f. Fourth Material Transfer Agreement ("Fourth MTA") (Exhibit F)
g. Fifth Material Transfer Agreement ("Fifth MTA") (Exhibit G).

(Collectively "the Krystal Agreements").

160. Under the terms of each of the Krystal Agreements, PeriphaGen provided Confidential Information including biological Material to Krystal, but retained ownership of, and restricted Krystal's use and disclosure of, such Confidential Information. The Krystal Agreements also restricted Krystal's disclosure of any results of any experiments conducted using the Confidential Information provided under the Krystal Agreements.

161. The Krystal Agreements are lawful contracts voluntarily and knowingly entered into by Krystal.

162. Krystal's breaches of the Krystal Agreements include but are not limited to, Krystal's use and disclosure of Confidential Information covered by the Krystal Agreements, Krystal's unauthorized use of PeriphaGen Material without PeriphaGen's authorization, Krystal's failures to report to PeriphaGen the results of experiments conducted using the Material covered by the Agreements, and Krystal's unauthorized use of PeriphaGen's vector plasmid, and cell line reagents.

163. As a direct and proximate result of Krystal's breaches of the Krystal Agreements, PeriphaGen has suffered, and will continue to incur, monetary damages.

164. As a direct and proximate result of Krystal's breaches of the Krystal Agreements, PeriphaGen has suffered, and continues to suffer, irreparable harm.

165. Krystal's conduct in breaching the Krystal Agreements was and is willful, intentional and unprivileged.

SIXTH COUNT
Unfair Competition
(Against all Defendants)

166. PeriphaGen incorporates each of the foregoing paragraphs of its Complaint.

167. Defendants, by engaging in the conduct described above, are and have been unlawfully competing with PeriphaGen.

168. Defendants have continuously engaged in unfair competition by unlawfully using PeriphaGen's Confidential Information, engaging in other acts and practices that are actionable under state law, and engaging in business practices that hinder, rather than promote, competition in the market, and are likely to create confusion in the marketplace as to the origin and designation of products in development by Krystal.

169. Defendants' conduct was and is intended to gain an unfair competitive advantage over PeriphaGen.

170. As a direct and proximate result of Defendants' conduct, PeriphaGen has suffered, is continuing, and will continue to suffer, irreparable harm.

171. As a direct and proximate result of Defendants' conduct, PeriphaGen has suffered, is continuing, and will continue to incur, monetary damages.

172. Defendants' conduct has been carried out with a specific intent to injure PeriphaGen in the conduct of its business and to gain an unfair competitive advantage over PeriphaGen.

173. Defendants' tortious conduct was sufficiently wanton, willful and reckless as to justify an award of punitive damages.

SEVENTH COUNT
False Description and False Designation of Origin under 15 U.S.C. §§1125(a)(1)(A) and 1125(a)(1)(B)
(Against all Defendants)

174. PeriphaGen incorporates each of the foregoing paragraphs of its Complaint.

175. Defendants have continuously misrepresented the origin, nature, and ownership of the material and technology underlying Krystal's lead product candidate, KB103, and Krystal's STAR-D gene therapy platform through, among other things, representations made in:

a. Pre-IND and IND submissions to FDA;
b. U.S. Patent Application No. 15/393,151, which has issued as U.S. Patent No. 9,877,990;
c. U.S. Patent Application No. 16/381,557, which has issued as U.S. Patent No. 10,525,090;
d. Krystal's S-1 filed with the Securities and Exchange Commission in September 2017;
e. Subsequent filings with the Securities and Exchange Commission; and
f. Presentations to potential investors and at investment conferences.

176. Moreover, Defendants' representations are likely to cause confusion or mistake, or to deceive, actual and prospective consumers as to the origin or sponsorship of Krystal's product candidates and technology, thereby constituting a false designation of origin.

177. The actions of Defendants were willful, knowing, and/or in bad faith.

178. As a direct and proximate result of the unfair and deceptive actions of Defendants, as set forth above, PeriphaGen is continuing to suffer damages. In addition, Defendants have been unjustly enriched by their wrongful actions having received the benefit of such contributions without compensation to PeriphaGen and have gained an unfair competitive advantage in the market.

RELIEF

PeriphaGen requests judgment in its favor and against Defendants as follows:

A. A permanent injunction against Defendants prohibiting them from using or disclosing for any purpose (including but not limited to for development of investors, for regulatory purposes, for business development and promotion, or for scientific discourse) Material or Confidential Information related to PeriphaGen's HSV-1 vector technology, including any and all material and information related to KB103, the STAR-D; platform, and the remaining products in Krystal's pipeline that utilize the STAR-D platform;

B. An Order requiring Defendants to disclose and assign to PeriphaGen (or cause any other individuals under their control to disclose and assign to PeriphaGen) all of the products/developments/etc. derived from any of PeriphaGen's Confidential Information;

C. An Order requiring Defendants to certify that they have returned to PeriphaGen all PeriphaGen's Confidential Information in their possession, custody, or control; and identifying any third parties to whom they disclosed such Confidential Information;

D. An Order enjoining Defendants from further prosecution of patent applications in which Plaintiffs have an ownership interest, or which contain Plaintiffs' Confidential Information;

E. Monetary damages in excess of $75,000, including actual damages, lost profits, or a reasonable royalty;

F. Disgorgement of all unjust enrichment and any benefits that flow or result from Defendants' misappropriation of PeriphaGen's Confidential Information;

G. Treble damages as permitted by law;

H. Incidental and consequential damages as permitted by law;

I. Punitive damages;

J. Attorneys' fees and costs as permitted by law;

K. Imposition of a constructive trust to hold for the benefit of PeriphaGen any and all equity or ownership stake the Krishnans have in Krystal;

L. Imposition of a constructive trust on all profits that Defendants receive as a result of their use or disclosure of the PeriphaGen's Confidential Information;

M. In the alternative, a running royalty on all profits that Defendants receive as a result of their use or disclosure of the PeriphaGen's Confidential Information;

N. An Order that Dr. Krisky and Dr. Wechuck are inventors on the '990, '016, '614, and '090 patents;

O. An accounting and paying over to PeriphaGen all sums by which Defendants by their wrongful conduct, have unjustly enriched themselves, and

P. Such other relief as the Court deems appropriate.

JURY DEMAND

Plaintiff demands a jury trial pursuant to Fed. R. Civ. P. 38.

May 1, 2020

Respectfully submitted,

DUANE MORRIS LLP

/s/ Robert L. Byer

Robert L. Byer
Rachel M. Good
600 Grant Street, Suite 5010
Pittsburgh, PA 15219-2802
(412) 497-1000
RLByer@duanemorris.com
RMGood@duanemorris.com

Anthony J. Fitzpatrick*
Michael R. Gottfried*
100 High Street, Suite 2400
Boston, MA 02110-1724
(857) 488-4200
AJFitzpatrick@duanemorris.com
MRGottfried@duanemorris.com
* *Pro hac vice* applications to be submitted

Patrick C. Gallagher*
1875 Corporate Blvd NW
Boca Raton, FL 33486
(561) 962-2131
PCGallagher@duanemorris.com
* *Pro hac vice* application to be submitted

Attorneys for PeriphaGen, Inc.

DM2\12552365.6